

## REMARKS

Claims 1, 41-43, 46, and 47 remain pending in this application and claims 55-60 are newly presented. The Applicant respectfully requests reconsideration of the application in view of the remarks below.

1. **Declarations of Goldberg, Dugan and Mee Pursuant to 37 CFR §1.132**

Included with this response are three Declarations: (1) by a co-inventor David Goldberg, who has nine (9) years experience in the textile industry including industrial and commercial mops [herein referred to as “the second Goldberg Declaration”]; (2) by Jeffrey S. Dugan, an expert having over fifteen (15) years of experience in textile and fiber industry, a master’s degree in textile chemistry and holds many patents on microfilaments and methods of making microfilaments [herein referred to as “the Dugan Declaration”]; and (3) by Brenda Mee who has 8 years experience in janitorial products industry with 4 of those years within the mop/broom industry [herein referred to as “the Mee Declaration”]. These Declarations will be referred to in the following discussions.

2. **Response to Obviousness Rejection over Nordin in view of “the-cloth website”**

On pages 2-4 of the Examiner’s Action, claims 1,41-43, 47-48, and 50-53 are again rejected under 35 USC 103(a) as being unpatentable over Nordin (US-5,804,274) in view of <http://www.the-cloth.com/ourmicro.shtml> (herein referred to as “the-cloth website”).

Claim 1 as recited above calls for a mop head coupling element; at least two cords, said at least two cords being separate and non-interwoven, each of said at least two cords comprising a plurality of filaments twisted together into a bundle, each of a said

plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection; and wherein each of said at least two cords is secured to said mop head coupling element.

Claim 1 as recited above is distinguished over Nordin in view of “the-cloth website” by requiring:

- (a) each cord being separate and non-interwoven; and
- (b) the filaments being split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

As stated on page 3 of the Examiner’s action, “Nordin does not include that a filament is a split filament that has a core member with a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection”.

First, the Applicants appreciate the Patent Office’s acknowledgement of the deficiencies of the teachings of Nordin. These are the same deficiencies recognized earlier in the Applicants’ response filed on January 2, 2006.

Further, the Applicants note, Nordin does not include the filament to be a split filament at all regardless of the cross sectional geometry of the filament.

Second, the Applicants want to address what the Patent Office feels the teaching of “the-cloth website” provides. On page 4 of the Examiner’s action, the Patent Office states, “the-cloth website includes a cross section of a split micro fiber (left most picture on page 1) that illustrates a microfiber having a core member with a plurality of

projections emanating therefrom and a wedge-shaped insert disposed between every other projection”. The Patent Office continues to state, “The fiber is used in a variety of fabrics, mops and applications for cleaning and is 80% polyester and 20% nylon”.

The foremost and main deficiency of “the-cloth website” is that it fails to teach at least two cords being separate and non-interwoven, wherein each cord comprises a plurality of microfilaments twisted together into a bundle and each of the microfilaments being split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

The attached Declaration of Mee provides further perspective of what “the-cloth website teaches. Mrs. Mee has eight (8) years of experience in the janitorial products industry and in paragraph 5, declares:

I have reviewed the printout of the version of “the-cloth website” [herein “the-cloth website printout”] that was posted on the internet on December 12, 2001. My review of the-cloth website printout indicates the-cloth website printout discloses various textile sheet and fabric products comprised of knitted and woven yarns of microfilaments. I believe the “cross section of fiber” photograph to be illustrative of the type of microfilament used in yarns of the textile sheet or fabric products described in the-cloth website printout. The-cloth website printout does not disclose a single product having separate, non-interwoven yarns (other than possibly a non-woven fabric where the yarns would not be separate). More specifically, the-cloth website printout does not disclose a string style mop having a plurality of separate, non-interwoven yarns comprised split microfilaments including a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

Because “the-cloth website” is deficient in teaching at least two cords being separate and non-interwoven, wherein each cord comprises a plurality of microfilaments twisted together into a bundle and each of the microfilaments being split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection, the Patent Office has not established a *prima facie* case of obviousness.

In this regard, there is no suggestion or motivation by Nordin or “the-cloth website” to substitute the filaments of Nordin for a split microfiber filament or to substitute the filaments of Nordin for a split microfiber filament including a core member having a plurality of projections with wedge-shaped inserts disposed between every other projection. “Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination”. *In re Geiger*, 815 F.2d 686, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987). Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 1438 (Fed. Cir. 1191). MPEP 2143.

Further, “when the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why combination of the reference teachings is proper... Absent such reasons or incentives, the teachings of the references are not combinable.” *Ex parte Skinner*, 2 USPQ 2d 1788, 1790 (B.P.A.I 1987)

The Examiner’s reason for the combination, “in order to provide a microfiber filament that is advantageous to cleaning and is super absorbent”, appears to be misplaced. It is not the purpose of the claimed invention to provide a filament that is advantageous to cleaning and is super absorbent. It is the purpose of the claimed invention to provide a mop having at least two separate and non-interwoven cords, each of said at least two cords comprising a plurality filaments twisted together into a bundle, each of a said plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

The Examiner's failure to provide the necessary suggestion or motivation creates a presumption that the combination of the references selected by the Examiner to support the obviousness rejection was based on hindsight. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998).

Further, the Examiner's statement to support the combination of the references illustrates the Examiner is defining the problem in terms of its solution which reveals improper hindsight in the selection of the prior art relevant to obviousness, as stated by the Federal Circuit in *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 45 USPQ 2d 1977, 1981-82 (Fed. Cir. 1998).

Additionally, the fact that the references can be modified or combined is insufficient to establish a *prima facie* case of obviousness. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998).

In view of the above, a *prima facie* case of obviousness has not be established and the rejection of claim 1 under 35 USC 103(a) over Nordin in view of "the-cloth website" is improper, and the Applicant respectfully request withdrawal of the rejection.

Moreover, Mr. Dugan having undisputable skill in the fiber and textile industry declares in paragraph 6 of "the Dugan Declaration":

It would not have occurred to me at the time of the Goldberg Application that a yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection would be used in a non-interwoven fashion (other than in a nonwoven fabric) as a cord for a string mop. End uses envisioned at the time included staple fibers for use in all kinds of nonwoven fabrics and filament yarns for use in knit or woven applications such as apparel and filtration substrates. Further, it was not known to me at the time that microfilaments would have any superior absorptive behavior (such as renders them useful for mops) merely from their smaller denier. Instead, I would have expected the typically hydrophobic

surfaces of the microfilaments to be poorly suited for use in mops, particularly in comparison to the absorptive properties of cotton fibers and yarns.

In paragraph 7 of “the Dugan Declaration”, Mr. Dugan declares:

It is of my opinion, that it would not have occurred to a person of skill at the time of the Goldberg Application that yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection could be used in a non-interwoven fashion and result in a feasible end product, such as a cord for a string mop. As stated above, the hydrophobic surfaces of the polymers typically envisioned for such splittable fibers would have led a person of skill to anticipate absorptive performance significantly inferior to that observed and also inferior to incumbent mop fibers and yarns such as those made of cotton.

Cleary, contrary to the Patent Office’s comment’s, substituting the filaments of Nordin for a split microfiber filament or to substitute the filaments of Nordin for a split microfiber filament including a core member having a plurality of projections with wedge-shaped inserts disposed between every other projection would not have been obvious to one of ordinary skill in the art and industry of the present invention.

3. **Response to Obviousness Rejection over EP 1 224 900 in view of “the-cloth website”**

On pages 4-5 of the Examiner’s Action, claims 1,41-42 and 51 are again rejected under 35 USC 103(a) as being unpatentable over EP 1 224 900 in view of <http://www.the-cloth.com/ourmicro.shtml> (herein referred to as “the-cloth website”).

Claim 1 as recited above calls for a mop head coupling element; at least two cords, said at least two cords being separate and non-interwoven, each of said at least two cords comprising a plurality filaments twisted together into a bundle, each of a said

plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection; and wherein each of said at least two cords is secured to said mop head coupling element.

Claim 1 as recited above is distinguished EP 1 224 900 in view of “the-cloth website” by requiring:

- (a) each cord being separate and non-interwoven; and
- (b) the filaments being split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

On page 5 of the Examiner’s action, the Examiner notes “EP 1 224 900 does not include the specific properties of the microfiber filaments.”

First, the Applicants appreciate the Patent Office’s acknowledgement of the deficiencies of the teachings of EP 1 224 900. These are the same deficiencies recognized earlier in the Applicants’ response filed on January 2, 2006.

Further, the Applicants note, EP 1 224 900 does not include the filament to be a split filament at all regardless of the cross sectional geometry of the filament.

As recited above, “the-cloth website” is that it fails to teach at least two cords being separate and non-interwoven, wherein each cord comprises a plurality of microfilaments twisted together into a bundle and each of the microfilaments being split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

The attached Declaration of Mee provides further perspective of what “the-cloth website teaches. Mrs. Mee has eight (8) years of experience in the janitorial products industry and in paragraph 5, declares:

I have reviewed the printout of the version of “the-cloth website” [herein “the-cloth website printout”] that was posted on the internet on December 12, 2001. My review of the-cloth website printout indicates the-cloth website printout discloses various textile sheet and fabric products comprised of knitted and woven yarns of microfilaments. I believe the “cross section of fiber” photograph to be illustrative of the type of microfilament used in yarns of the textile sheet or fabric products described in the-cloth website printout. The-cloth website printout does not disclose a single product having separate, non-interwoven yarns (other than possibly a non-woven fabric where the yarns would not be separate). More specifically, the-cloth website printout does not disclose a string style mop having a plurality of separate, non-interwoven yarns comprised split microfilaments including a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

Because “the-cloth website” is deficient in teaching at least two cords being separate and non-interwoven, wherein each cord comprises a plurality of microfilaments twisted together into a bundle and each of the microfilaments being split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection, the Patent Office has not established a *prima facie* case of obviousness.

In this regard, there is no suggestion or motivation by EP 1 224 900 or “the-cloth website” to substitute the filaments of EP 1 224 900 for a split microfiber filament or to substitute the filaments of Nordin for a split microfiber filament including a core member having a plurality of projections with wedge-shaped inserts disposed between every other projection. “Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination”. *In re Geiger*, 815 F.2d 686, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987). Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based



on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 1438 (Fed. Cir. 1191). MPEP 2143.

Further, "when the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why combination of the reference teachings is proper... Absent such reasons or incentives, the teachings of the references are not combinable." *Ex parte Skinner*, 2 USPQ 2d 1788, 1790 (B.P.A.I 1987)

The Examiner's provides the same reasoning for the combination as provided in the obviousness rejection of Nordin in view of "the-cloth website". As stated above, the reason appears to be misplaced and is conclusionary. It is not the purpose the claimed invention to provide a filament that is advantageous to cleaning and is super absorbent. It is the purpose of the claimed invention to provide a mop having at least two cords being separate and non-interwoven, each of said at least two cords comprising a plurality filaments twisted together into a bundle, each of a said plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

Again, the Examiner's failure to provide the necessary suggestion or motivation creates a presumption that the combination of the references selected by the Examiner to support the obviousness rejection was based on hindsight. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998).

Further, as stated above, the Examiner's statement to support the combination of the references illustrates the Examiner is defining the problem in terms of its solution which reveals improper hindsight in the selection of the prior art relevant to obviousness, as stated by the Federal Circuit in *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 45 USPQ 2d 1977, 1981-82 (Fed. Cir. 1998).

Additionally, the fact that the references can be modified or combined is insufficient to establish a *prima facie* case of obviousness. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998).

In view of the above, a *prima facie* case of obviousness has not be established and the rejection of claim 1 under 35 USC 103(a) over EP 1 224 900 in view of “the-cloth website” is improper, and the Applicant respectfully requests withdrawal of the rejection.

Moreover, Mr. Dugan having undisputable skill in the fiber and textile industry declares in paragraph 6 of “the Dugan Declaration”:

It would not have occurred to me at the time of the Goldberg Application that a yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection would be used in a non-interwoven fashion (other than in a nonwoven fabric) as a cord for a string mop. End uses envisioned at the time included staple fibers for use in all kinds of nonwoven fabrics and filament yarns for use in knit or woven applications such as apparel and filtration substrates. Further, it was not known to me at the time that microfilaments would have any superior absorptive behavior (such as renders them useful for mops) merely from their smaller denier. Instead, I would have expected the typically hydrophobic surfaces of the microfilaments to be poorly suited for use in mops, particularly in comparison to the absorptive properties of cotton fibers and yarns.

In paragraph 7 of “the Dugan Declaration”, Mr. Dugan declares:

It is of my opinion, that it would not have occurred to a person of skill at the time of the Goldberg Application that yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection could be used in a non-interwoven fashion and result in a feasible end product, such as a cord for a string mop. As stated above, the hydrophobic surfaces of the polymers typically envisioned for such splittable fibers would have led a person of skill to anticipate absorptive performance

significantly inferior to that observed and also inferior to incumbent mop fibers and yarns such as those made of cotton.

Cleary, contrary to the Patent Office's comment's, substituting the filaments of EP 1 224 900 for a split microfiber filament or to substitute the filaments of Nordin for a split microfiber filament including a core member having a plurality of projections with wedge-shaped inserts disposed between every other projection would not have been obvious to one of ordinary skill in the art and industry of the present invention.

4. **Response to Obviousness Rejection over Nordin in view of Dugan**

On page 6 of the Examiner's Action, claims 1, 41-43, 47-48, and 50-53 are again rejected under 35 USC 103(a) as being unpatentable over Nordin (US-5,804,274) in view of Dugan (US-6,465,095).

Claim 1 as recited above calls for a mop head coupling element; at least two cords, said at least two cords being separate and non-interwoven, each of said at least two cords comprising a plurality filaments twisted together into a bundle, each of a said plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection; and wherein each of said at least two cords is secured to said mop head coupling element.

Claim 1 as recited above is distinguished over Nordin in view of Dugan by requiring:

- (a) each cord being separate and non-interwoven; and

(b) the filaments being split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

The Examiner states “ Dugan discloses a type of yarn incorporating fibers and twisting at least two fibers or filaments together wherein the filaments are less than 1 denier, specifically 0.5 denier. The filament comprises a combination of polyester and nylon material. The filaments are split to comprise a core member, a plurality of projections, and a wedge-shaped insert disposed between every other projection. The filaments are split or non-split. The split filaments have good barrier properties and a high fiber surface area.

Dugan discloses yarns of the fibers of Dugan may be prepared for use in forming non-woven, woven and knit fabrics (column 15, lines 58-67; column 16, lines 1-34). Dugan does not disclose that a yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection would be used in a non-interwoven fashion (other than in a nonwoven fabric). Claim 1 as recited above makes the distinction of the yarns being non-interwoven and not used in the manufacture of a fabric. Dugan clearly makes no suggestion the yarns comprising the fibers of Dugan can be used in a separate, non-interwoven application, this is made clear through a reading of the passage of text from column 15, line 58 to column 16, line 34.

Further, Mr. Dugan, the inventor of the yarns and fibers of the ‘095 reference declares in paragraph 6 of “the Dugan Declaration”:

It would not have occurred to me at the time of the Goldberg Application that a yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection would be used in a non-interwoven

fashion (other than in a nonwoven fabric) as a cord for a string mop. End uses envisioned at the time included staple fibers for use in all kinds of nonwoven fabrics and filament yarns for use in knit or woven applications such as apparel and filtration substrates. Further, it was not known to me at the time that microfilaments would have any superior absorptive behavior (such as renders them useful for mops) merely from their smaller denier. Instead, I would have expected the typically hydrophobic surfaces of the microfilaments to be poorly suited for use in mops, particularly in comparison to the absorptive properties of cotton fibers and yarns.

It is noted on page 3 of the Examiner's action, "Nordin does not include that a filament is a split filament that has a core member with a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection".

Again, the Applicants appreciate the Patent Office's acknowledgement of the deficiencies of the teachings of Nordin. These are the same deficiencies recognized earlier in the Applicants' response filed on January 2, 2006.

The Applicants further note, Nordin does not include a filament to be split at all regardless of the cross sectional geometry of the fiber.

Thus, the Examiner has not made a showing of a yarn comprised of split microfilaments can be used in a separate and non-interwoven application and has not established a *prima facie* case of obviousness.

In this regard, there is no suggestion or motivation by Nordin or Dugan to substitute the filaments of Nordin for a split microfiber filament or to substitute the filaments of Nordin for a split microfiber filament including a core member having a plurality of projections with wedge-shaped inserts disposed between every other projection.

“Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination”. *In re Geiger*, 815 F.2d 686, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987).

Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 1438 (Fed. Cir. 1191). MPEP 2143.

Further, “when the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why combination of the reference teachings is proper... Absent such reasons or incentives, the teachings of the references are not combinable.” *Ex parte Skinner*, 2 USPQ 2d 1788, 1790 (B.P.A.I 1987).

The Examiner’s reason for the combination “in order to provide a microfiber filament that is advantageous to cleaning and to provide microfiber filaments that have a high fiber surface area” appears to be misplaced and is conclusionary. It is not the purpose the claimed invention to provide a microfiber filament that is advantageous to cleaning and to provide microfiber filaments that have a high fiber surface area. It is the purpose of the claimed invention to provide a mop having at least two cords being separate and non-interwoven, each of said at least two cords comprising a plurality filaments twisted together into a bundle, each of a said plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

The Examiner’s failure to provide the necessary suggestion or motivation creates a presumption that the combination of the references selected by the Examiner to support

the obviousness rejection was based on hindsight. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998).

Further, the Examiner's conclusionary statement to support the combination of the references illustrates the Examiner is defining the problem in terms of its solution which reveals improper hindsight in the selection of the prior art relevant to obviousness, as stated by the Federal Circuit in *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 45 USPQ 2d 1977, 1981-82 (Fed. Cir. 1998).

Additionally, the fact that the references can be modified or combined is insufficient to establish a *prima facie* case of obviousness. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998).

In view of the above, a *prima facie* case of obviousness has not be established and the rejection of claims 1 and 51 under 35 USC 103(a) over EP 1 224 900 in view of "the-cloth website" is improper, and the Applicant respectfully requests withdrawal of the rejection.

Moreover, Dugan himself declares in paragraph 6 of "the Dugan Declaration":

It would not have occurred to me at the time of the Goldberg Application that a yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection would be used in a non-interwoven fashion (other than in a nonwoven fabric) as a cord for a string mop. End uses envisioned at the time included staple fibers for use in all kinds of nonwoven fabrics and filament yarns for use in knit or woven applications such as apparel and filtration substrates. Further, it was not known to me at the time that microfilaments would have any superior absorptive behavior (such as renders them useful for mops) merely from their smaller denier. Instead, I would have expected the typically hydrophobic surfaces of the microfilaments to be poorly suited for use in mops, particularly in comparison to the absorptive properties of cotton fibers and yarns.

In paragraph 7 of “the Dugan Declaration”, Mr. Dugan declares:

It is of my opinion, that it would not have occurred to a person of skill at the time of the Goldberg Application that yarn [cord] comprising a plurality microfilaments twisted together into a bundle, wherein each of the microfilaments are split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection could be used in a non-interwoven fashion and result in a feasible end product, such as a cord for a string mop. As stated above, the hydrophobic surfaces of the polymers typically envisioned for such splittable fibers would have led a person of skill to anticipate absorptive performance significantly inferior to that observed and also inferior to incumbent mop fibers and yarns such as those made of cotton.

Cleary, contrary to the Patent Office’s comment’s, substituting the filaments of Nordin for a split microfiber filament or to substitute the filaments of Nordin for a split microfiber filament including a core member having a plurality of projections with wedge-shaped inserts disposed between every other projection would not have been obvious to one of ordinary skill in the art and industry of the present invention.

5. **Declaration of Goldberg and Secondary Considerations**

As stated by the Federal Circuit:

[E]vidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not. It is to be considered as part of all the evidence, not just when the decision maker remains in doubt after reviewing the art. *Stratoflex, Inc. v. Aeroquip Corp.*, 218 USPQ 871, 879 (Fed. Cir. 1993) [Emphasis added.]

and

Thus when differences that may appear technologically minor nonetheless have a practical impact, in a crowded field, the decision-maker must consider the obviousness of the new structure in this light. Such objective indicia as commercial success, or filling an existing need, illuminate the technological and commercial environment of the inventor, and aid in understanding state of the art



at the time the invention was made. *Continental Can Co. USA v. Monsanto Co.*, 20 USPQ 2d 1746, 1752 (Fed. Cir. 1991) [Emphasis added.]

The attached Declarations of Mr. Goldberg provide evidence to support the following:

A) That the claimed invention is being copied by competitors; and

B) That the claimed invention has experienced commercial success and that there is a nexus between the commercial success and the claimed invention.

5A. Copying by competitors.

The attached Declaration of Mr. Goldberg provides evidence of copying by competitors. In paragraphs 4 to 4e, Mr. Goldberg declares that he is aware of competitors copying and offering for sale the invention as recited in claim 1. In this Declaration, Mr. Goldberg provides several timelines of presenting the invention as recited in claim 1, to the various companies, who at first showed no interest in licensing the invention and then subsequently copied and are currently are offering the invention for sale.

5B. The claimed invention has experienced commercial success.

Mr. Goldberg's Declaration also provides evidence of the commercial success of the claimed invention and of the nexus of that success with the invention recited in claim 1. In paragraph 5, Mr. Goldberg declares the invention recited in claim 1 is being offered for sale by retail giants including Costco, Bed Bath and Beyond, Wal-Mart, and Linen & Things and is also being offered by companies including Rubber Maid, 3M, California Car Duster, Tuway, Quickie, Casabella, and Texas Feathers. He continues to declare the 3M and California Car Duster order and continue to order the invention as recited in claim 1 from Leading Edge Products, Inc. and its representatives.

Further, the copying and the offer of sale of the invention by at least five (5) different competitors is indication in and of itself the invention has experienced commercial success and wide acceptance by the industry.

The Applicants submits that this Declaratory evidence of the copying by competitors, acceptance into the industry, and the commercial success and the nexus of that success to the claimed invention illustrate the non-obviousness of the inventions recited in claim 1. The Applicants respectfully request that these rejections as obvious in view of Nordin, “the-cloth website”, EP 1 224 900, and Dugan be reconsidered and withdrawn.

6. **Newly presented claims 56-60**

Claim 55 as recited above calls for:

a coupling element;  
at least two cords, said at least two cords being separate and non-interwoven, each of said at least two cords comprising a plurality filaments twisted together into a bundle, each of a said plurality of filaments are of a denier from about 0.02 to about 0.99, each of said plurality of filaments are split and comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection; and wherein each of said at least two cords is attached to coupling element.

Claim 55 is distinguished over Nordin, Dugan, EP 1 224 900, and “the-cloth website” taken singularly or in combination art by requiring:

- (a) each cord being separate and non-interwoven; and
- (b) the filaments being split to comprise a core member, a plurality of projections emanating from the core member and a wedge-shaped insert disposed between every other projection.

The Applicants set forth the arguments as presented above in sections 2-5 here for the patentability of claim 55. Claims 56-60 as recited above add additional features of claim 55 and thus are submitted to be a-fortiori, patentable.

7. **Conclusion**

The Applicants believe that these Amendments and Remarks address the rejections of the subject Office Action and places the application in condition for allowance. An early and favorable action on the merits of the application is requested.

The Examiner is hereby requested to telephone the undersigned agent of record at 727-538-4144 if such would further or expedite the prosecution of the instant application.

Respectfully submitted,

/Stephen Lewellyn/

Stephen Lewellyn  
Agent for Applicant  
Registration No. 51,942

Dated: August 14, 2006  
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